BOSTON COMMON
ASSET MANAGEMENT, LLC

January 2013

Boston Common's Approach to the Energy Sector

DEDICATED TO THE PURSUIT OF FINANCIAL RETURN & SOCIAL CHANGE

IN BRIEF:

In the last few weeks, we've heard from many of you regarding a growing debate over the appropriate way to invest in the fossil fuel sector. Many of these questions have emerged from a fossil fuel divestment campaign led by Bill McKibben's 350.org.

In this piece, we lay out how Boston Common aims to provide for society's transition to a low carbon economy over a manageable time horizon by investing selectively in more carbon-efficient fossil fuels, by preferring firms with energy efficient products and processes over those with more resource-intensive alternatives, and by engaging the companies we own to improve their energy use.

A Practical Challenge

In his July 2012 Rolling Stone article "Global Warming's Terrifying New Math", Bill McKibben highlights scientific research suggesting that, if we're to avoid environmental catastrophe, we can consume at most 20% of the world's remaining hydrocarbon reserves. He asserts that the remaining 80% must be left in the ground, as "stranded assets" with no value. On this basis, he's since launched a campaign to divest from companies that produce fossil fuels.

We praise McKibben's communicating the planetary implications of unconstrained carbon emissions so clearly and to such a broad audience. His work is an important contribution to the global struggle to address climate change, reduce greenhouse gases, and adapt equitably. We don't think divestment alone can meaningfully raise the cost of capital for hydrocarbon producers without widespread adoption. Nevertheless, as in the anti-apartheid movement, we recognize the symbolic power of a divestment campaign. The activist community must keep pushing climate change to the forefront by bringing it to every available forum. In addition to our own pragmatic approach of selective investment and engagement, we have long implemented strategies that allow clients to divest from large portions of the Energy sector at their request. Our preliminary analysis suggests screening out McKibben's list of 200 hydrocarbon producers from our model portfolios would lead to a minimal increase in the expected tracking error of the resulting portfolios versus broad market benchmarks.

But we also see in the McKibben argument a practical challenge to the broader investment community that far exceeds its symbolic value to a small group of activists. What is a reasonable way forward for the entire economy? Are there ways that an asset owner with a long time horizon might help shape a sensible future from this quagmire? Can long-term investors structure a reasonable return when so much of the investable universe is at risk of impairment? Boston Common's approach seeks to address this practical challenge.

The Scope of the Problem

We believe this challenge has much broader implications than to the list of 200 hydrocarbon producers McKibben targets. Consider for example energy services companies, which provide drilling services, rigs, and related equipment to oil and gas producers. McKibben's thesis implies that we should stop drilling new wells today, making these businesses nearly obsolete. Electric utilities face a similar hurdle. The utilities own and operate plants designed to burn hydrocarbons, including an unhealthy share that burn coal, which is more pollutive than oil and gas. If we're to cut emissions radically and right away, these plants should be shuttered. McKibben's boycott ignores the implications for these and similar industries, which have as much if not more at stake than the producers themselves.

We extrapolate further to industries that will be deeply affected by climate change but perhaps not cut to the core, for example: the transport and shipping sectors, energy-intensive chemicals and fertilizers, livestock agriculture, deforestation, and additional industries further down the value chain from these. If carbon were priced to reflect its true cost, we'd expect to see follow-on effects throughout the economy, with the most hydrocarbon-intensive products and firms losing competitiveness to more efficient alternatives. This dynamic is admittedly too complex to bring to an activist campaign such as McKibben's, but it's an essential consideration in running an investment portfolio for the long run, as we're doing.

Another Way Forward

Instead of a policy of wholesale divestment, we believe a more reasonable framework provides a transition to a low carbon economy over a manageable time horizon. How abruptly that transition happens is a clear point of debate and one that we monitor closely. Boston Common avoids investments in coal, which we believe should be scaled down immediately. Instead, we favor the use of natural gas, which we view as a necessary transition fuel over the next ten to 20 years. We invest selectively in oil, avoiding the most resource-intensive means of extraction. We favor renewables, to the extent they appear financially sound and fall within our opportunity set. And most importantly, we look for providers of and, those we consider, leaders in energy efficiency and technological solutions throughout the economy's value chain, which will benefit competitively from the transition to a low-carbon economy.

SUNSET COAL

Coal is the most pollutive of the major hydrocarbon fuel sources, and **represents roughly two thirds of the potential emissions inherent in global hydrocarbon reserves**.[1] We believe **coal consumption should be rapidly scaled down**. We avoid investments in companies that derive their primary revenues from coal or whose businesses rely largely on the coal industry, as their returns are subject to large risks from a changing regulatory environment. And we engage financial companies regarding the risks and climate change impacts of lending to coal-mining companies and coal-powered electric utilities.

BRIDGE NATURAL GAS

Natural gas is a much cleaner-burning fuel than coal, producing about **half the rate of emissions for a comparable amount of power**. Its compelling price should catalyze the move away from coal, providing a **bridge fuel for the next ten to 20 years** as we transition from our current state to a lower emissions future.

[1]World Energy Outlook 2012 Executive Summary, International Energy Agency, November 2012, p3.

The Economist. "Europe's dirty secret: The unwelcome renaissance." Jan 05 2013.

As a result, we invest in natural gas producers, gas pipeline companies, LNG producers, and predominately gas-fired electric utilities. These industries have their own environmental challenges, for example in the repercussions of hydraulic fracturing. These challenges, however, are surmountable at some cost. Here we are active investors, and have built investor coalitions to demand high standards, asking the industry to address unintended or overlooked consequences, such as fugitive methane emissions and chemical contamination of water sources. We believe the gas industry has an opportunity to improve how it operates, which we can help steward through engagement. And in the near term it needs to grow, not shut down, as we seek to replace more carbon-intensive coal and oil consumption.

RATION OIL

We believe **widespread use of oil as a transport fuel over the next ten years to fifteen years will be a practical necessity** if we're to maintain or raise global standards of living, even in scenarios where we dramatically ratchet down our consumption over the longer term. We believe excessively resource-intensive forms of extraction, such as Canadian oil sands, will prove unsustainable. **We invest in what we consider best-in-class oil producers, but avoid companies primarily focused on oil sands**. We continue to assess the risk/reward of these investments in comparison to our other opportunities in the marketplace.

We currently own the following names from 350.org's divestment list in our U.S. Core and International Equity portfolios: EOG, Apache, BG, and Statoil.[2] These companies engage in the exploration and production of both oil and natural gas. We also own some firms that provide equipment and services to the oil and gas industry.

STOP NUKES

Although it's carbon-free, we don't invest in nuclear power. We believe the tail risks are too great, as the Fukushima Daiichi disaster demonstrated, and that long-term disposal of radioactive wastes remains unresolved. We believe **bridge fuels, efficiency savings, renewables, and carbon capture and storage technologies can provide a safer and ultimately more effective long-term solution**.

GROW RENEWABLES

Renewables such as **solar, wind, and second-generation biofuels have tremendous promise over the long-term**. They also require large investments with substantial lead time to scale up, as well as additional innovations to improve their economics. We closely follow the prospects of publicly-traded equipment makers and farm developers in wind and solar. While the promise of these industries is great, they've been challenging for public equity investors given rapidly changing technologies, cutthroat global competition, unstable subsidy regimes, and unreliable bank financing. We continue to look for opportunities as these industries evolve. We've generally **avoided investments in certain biofuel feedstocks, such as corn ethanol, which we don't think are truly viable given their poor energy return on investment**. Earlier-stage technologies such as ocean power, fuel cells, and second generation biofuels generally are better suited to venture capital than public market investments.

[2]The information in this document should not be considered a recommendation to buy or sell any security. There is no assurance that any securities discussed in this report will remain in an account's portfolio at the time you receive this document. The securities discussed do not represent an account's entire portfolio and may represent only a small portion of an account's holdings. It should not be assumed that any securities transactions we discuss were or will prove to be profitable. Past performance does not guarantee future results. All investments involve risk, including the risk of losing principal.

SEEK EFFICIENCY EVERYWHERE

Across all sectors, we seek companies who have achieved competitive advantages in energy efficiency, either by developing leaner manufacturing processes or by providing energy-saving products and services, such as fuel-efficient engines, better batteries, smart electricity meters, and specialty chemicals. Typically, we skeptically view firms and industries that have large emissions footprints, for example in basic chemicals and unsustainable forestry. By **considering climate change issues across our entire investment opportunity set**, we believe we can better position our investments to embrace a sustainable, low emissions future.

ENGAGE WHERE INVESTED

We believe divestment is appropriate in certain segments such as coal, oil sands, and nuclear energy. But we've **used engagement to good effect in improving practices** where we have investments: with natural gas producers, in the emerging solar industry, in banking (where we have questioned capital flows to mountaintop coal removal), and in pharmaceuticals (encouraging fleet efficiency). We think of global climate change and the carbon challenge as relevant to our investment choices in all economic sectors, and direct our shareholder engagement efforts accordingly.

Still, like McKibben, we think it unlikely that one could resolve the climate risk in a portfolio simply by owning and engaging in dialogue with the most deeply-affected companies. Shareowner engagement is a critical tool in reforming how a company conducts its core business - for example whether it has taken proper safety precautions and is maintaining constructive relations with its workers. In our experience, engagement makes less headway when you're asking a company to shut down its core business.

Where the World is Going

As attention on climate change grows, we see more investors moving to our way of thinking, new avenues for discussion and engagement, and greater possibilities for constructive change. We think divestment can be an important tool in bringing awareness to this issue. But we think a more carefully-framed approach will have appeal to a much broader constituency, and ultimately will add the most value. This more pragmatic approach requires that we recognize: (1) climate change carries challenges for all manners of businesses, not just fossil fuel companies; (2) the investing public needs to abandon its unsustainable course and put its stake not in divestment, per se, but in a practical transition to a low-emissions future; and (3) owning and engaging threatened firms has its place, but won't be enough on its own to protect shareholder value. At Boston Common, we're putting our stake in a practical transition, and advocating for it as shareowners where we see opportunity. We believe in time the world must do likewise.